

The invention relates to a pacing system, in particular an implantable pacemaker for pacing multiple chambers of the heart and sensing signals from the myocardium of multiple chambers of the heart which will
5 allow the verification of a cardiac evoked response resulting from a delivered charge to the heart tissue comprising:

a preamplifier having

a) a DC coupled buffer amplifier first stage, comprising at least one buffer amplifier for each of the at least two electrode inputs,

10 b) a switch matrix following the buffer amplifiers allowing sensing of the differential between any two of the at least two electrode inputs,

c) a next stage of differential amplifiers providing gain to either the differential between any two electrode inputs or one input to ground, and

15 d) a next stage filter stage.